

What is claimed is:

1. A polymer obtainable by free-radical polymerization of
  - a) 30 to 99% by weight of tert-butyl acrylate and/or tert-butyl methacrylate as monomer A,
  - b) 1 to 70% by weight of acrylic acid and/or methacrylic acid as monomer B and
  - c) 0 to 5% by weight of a free-radically copolymerizable monomer or a free-radically copolymerizable monomer mixture as monomer C, where at least one of the monomers C produces a homopolymer with a glass transition temperature of less than 30°C,  
with the proviso that the % by weight add up to 100,  
where the K value of the polymers is between 27 and 38, with the proviso that the polymerization is carried out in the presence of a regulator if the K value of the polymers is less than or equal to 35.
2. The polymer according to claim 1, obtainable by free-radical polymerization of
  - a) 60 to 80% by weight of monomer A,
  - b) 20 to 40% by weight of monomer B and
  - c) 0 to 5% by weight of monomer or monomer mixture C.
3. The polymer according to either or claims 1 and 2, where the amount of monomer C is less than 3% by weight.
4. The polymer according to one of claims 1 to 3, where the K value is in the range from 29 to 35.
5. The polymer according to one of claims 1 to 4, where the K value is in the range from 30 to 34.
6. The polymer according to one of claims 1 to 5, where the carboxylate groups are partially or completely neutralized.
7. The polymer according to one of claims 1 to 6, where monomer A is tert-butyl acrylate, monomer B is methacrylic acid and monomer C is ethyl acrylate.

8. A process for the preparation of the polymers according to one of claims 1 to 7, which comprises free-radically polymerizing monomer A, monomer B and monomer or monomer mixture C, where the K value of the polymers is between 27 and 38, with the proviso that the polymerization is carried out in the presence of a regulator if the K value of the polymers is less than or equal to 35.
9. The use of the polymers according to one of claims 1 to 7 as film former.
10. The use of the polymers according to one of claims 1 to 7 in cosmetic preparations, in particular in hair cosmetic preparations.
11. The use of the polymers according to one of claims 1 to 7 in preparations for oral care and dental care.
12. A film former comprising at least one of the polymers according to one of claims 1 to 7.
13. A cosmetic preparation comprising at least one of the polymers according to one of claims 1 to 7.
14. A preparation for oral care and dental care comprising at least one of the polymers according to one of claims 1 to 7.